ABSTRACT

A distributed data processing system and method are presented

herein for purposes of controlling allocation of resources and task

execution. The system includes a communication network that passes

5   messages between computers connected to the network. A plurality of

computers are connected to the network and run programs thereon

including a central authority and at least first and second autonomous

agents. The central authority generates a graph associated with each

agent and wherein each graph represents for the associated agent what

10   resources that agent has and what task or tasks that agent may perform.

Each agent employs the associated graph to determine what resource or

resources are needed by that agent to carry out the task of tasks to be

performed by that agent. The agents negotiate with each other for the

resources needed to carry out the task or tasks to be performed by the

15   agents.